

STUDENT WORKBOOK

For use with Chapter 5

Text Pages 114-153

CHAPTER 5 STUDY GUIDE

DIRECTIONS: As you read the chapter, complete the following items. Later, you can use this guide to study the chapter information.

Prenatal Development

1. Prenatal development is development of a baby during the period before birth

Conception

2. Define:

Ovum A female cell or egg.

Uterus An organ in a woman's body in which the baby develops during pregnancy; also called the womb.

Sperm Male cell.

Conception The union of ovum and sperm resulting in the beginning of pregnancy.

Zygote A fertilized egg.

Period of the Zygote

3. The first stage in the development of a baby is the period of the zygote and lasts approximately two weeks. The zygote attaches to the lining of the uterus and is the size of a pinhead at the end of two weeks.

Period of the Embryo

4. The second stage of the pregnancy is the period of the embryo and lasts from the third week to the eighth week of pregnancy.
- During this time, the placenta, which attaches the sacs around the embryo to the uterus, and the umbilical cord, the tube that connects the placenta to the embryo, develop. The tube carries nourishment and oxygen from the mother's blood stream to the baby and takes wastes from the baby. The amniotic fluid surrounds the

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embryo and acts as a cushion to protect it. At three weeks after conception, the

heart is the largest organ, and it has already started beating.

Period of the Fetus

5. The last stage of pregnancy is the period of the fetus and begins about the eighth or ninth week and lasts until birth. In the early part of this period, the baby has the beginnings of all organs and body parts. By the fourth or fifth month of development, the kicking and moving of the baby can be felt by the mother, which is called quickening. By the seventh month, with a great deal of medical help, the fetus is capable of living outside the uterus. During the final month, the fetus gains weight rapidly and adds fat deposits to help maintain body heat after birth. In the last few weeks, the fetus stores nutrients and builds immunities to disease and infection. During the ninth month of pregnancy, the fetus drops into the birth canal, which is called lightening, to prepare for labor. After about 40 weeks of preparation, the baby is ready to be born.

The Genetic Package

6. What is heredity? Name three characteristics that can be hereditary.

Heredity is the passing of characteristics from one generation to the next. Any three characteristics: physical build; skin color; hair texture and color; color and shape of the eyes; shape and size of ears, hands, and feet; blood type.

7. Explain the relationship between chromosomes and genes.

Chromosomes are threadlike particles made up of thousands of genes, which determine the characteristics a person inherits.

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8. Explain the difference between dominant and recessive genes.

Dominant genes are stronger and will dictate the outcome when paired with recessive, or weaker, genes.

Sex Determination

9. How is the sex of a baby determined?

By the sex chromosome from the sperm. If the sperm has an X chromosome, the baby will be a girl. A Y chromosome in the sperm results in a boy.

Multiple Births

10. Explain how each of the following occurs:

Identical twins The fertilized egg splits in two, and each part develops into a separate child.

Fraternal twins Two eggs are released and are fertilized by two sperm, resulting in two babies.

Infertility

11. What is the relationship between infertility and a fertility analysis?

Couples who are infertile (unable to have children) may undergo a fertility analysis to determine the cause of the problem.

12. Explain possible treatment for women who do not ovulate. Discuss any complications or concerns.

A doctor may prescribe fertility drugs to stimulate the release of eggs. Side effects may be abdominal pain, nausea, diarrhea, dizziness, and multiple births.

13. Explain possible treatment for men who do not produce enough healthy sperm.

Prescribed drugs may be given.

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14. What are the five options for infertile couples? Briefly describe each.

Options	Descriptions
Adoption	A child who is not biologically their own becomes a legal part of their family.
Artificial Insemination	Sperm is injected into the uterus with a special syringe.
In vitro fertilization	An egg from the woman is removed and fertilized with the man's sperm; then it is implanted in the woman's uterus.
Ovum transfer	A fertilized egg from a donor is implanted in the infertile woman's womb.
Surrogate motherhood	Another woman is hired to carry and deliver a baby for the couple.

Birth Defects

15. When are babies classified as premature? What risks are associated with prematurity?

Premature babies are born before eight and one-half months or weigh under 5-1/2 pounds (2.5 kg).

They are vulnerable to infection, lung ailments, and other problems.

16. What is a birth defect?

It is an abnormality that affects the structure or function of the body.

Types of Birth Defects

17. Give an example of a physical birth defect.

Possible answers are a misshapen foot or an extra finger.

18. Give an example of a functional birth defect.

Possible answers are blindness, deafness, or mental retardation.

19. Differentiate between miscarriage and stillbirth.

Miscarriage is the natural ending of pregnancy before the embryo or fetus is able to survive.

Stillbirth is the natural ending of pregnancy after 20 weeks.

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Causes of Birth Defects

20. What is the difference between hereditary and environmental defects?

Hereditary defects are inherited from one or both parents; environmental defects are caused by factors in the environment.

21. Fill in the following chart with information from your reading.

	Cause	Effect	Prevention or Treatment
Cystic fibrosis	Heredity-recessive gene.	Problems with respiration and digestion; death before adulthood.	Possible to identify carriers of genes; no cure, special diets; lung exercises.
Down syndrome	Chromosome 21 error	Mental retardation; delayed development.	Can detect before birth; special therapy and schooling.
PKU	Heredity—recessive gene.	Body unable to process specific protein; mental retardation.	Possible to detect at birth; no cure; treated with special diet to reduce brain damage.
Sickle-cell anemia	Heredity—recessive gene.	Malformed red blood cells interfere with oxygen supply to cells; tiredness; lack of appetite; pain.	No cure; treat symptoms.
Tay-Sachs disease	Heredity—recessive gene.	Lack of a certain chemical in blood; can't use fats; severe brain damage; death by age two or three.	No cure; no treatment.

22. How can a genetic counselor help prospective parents?

A genetic counselor can tell couples whether genetic problems are present and their chances of having a defective child.

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23. What are the most common prenatal tests for diagnosing birth defects? Briefly explain each.

Prenatal Test	Explanation
Amniocentesis	A small sample of amniotic fluid is withdrawn and tested.
Ultrasound	Sound waves are used to make a video image of the fetus.
Chorionic villi sampling	Samples of tissue surrounding the fetus are removed and analyzed.

Avoiding Environmental Hazards

24. Differentiate between fetal alcohol syndrome and fetal alcohol effects.

Fetal alcohol syndrome is a condition of physical deformities and cognitive problems resulting from a mother's consumption of alcohol during pregnancy. Fetal alcohol effects is a less serious condition causing less severe damage.

25. Fill in as much of the chart below as possible from your reading.

Environmental Hazard	Effect	Treatment or Cure	Prevention
Alcohol	Birth defects (fetal alcohol syndrome).	None	Avoid alcohol during pregnancy.
Caffeine	Possible birth defects.	Varies with type of effect.	Avoid caffeine during pregnancy.
Tobacco (nicotine)	Low birth weight; premature birth.	Special care to ensure survival.	Avoid smoking during pregnancy.
Abused drugs (cocaine, marijuana, and the like)	Addiction of baby; possible birth defects.	Baby must go through withdrawal.	Avoid drugs during pregnancy.
X rays	Birth defects.	Varies with type of effect.	Avoid X rays or take special precautions during pregnancy.
Rubella	Birth defects such as deafness, blindness, heart defects, or mental retardation.	Varies with type of effect.	Get vaccine before pregnancy or avoid exposure.

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Environmental Hazard	Effect	Treatment or Cure	Prevention
Sexually transmitted diseases (STDs) 1. Syphilis, gonorrhea, and herpes	Illness, deformity, or death.	Some can be treated with drugs.	Have STDs treated promptly. Avoid becoming pregnant if infected.
2. HIV/AIDS	Death; attacks immune system.	No known cure.	Have protected sex or no sex; refrain from sharing needles.

26. How do drugs affect prenatal development during the following stages?

First three months of pregnancy The mother suffers a miscarriage, or there is no effect. The child has a great chance of being malformed.

Last six months Drugs slow growth and can cause infections or abnormal bleeding at birth.

27. Why should a woman who is likely to become pregnant avoid taking any drugs?

Usually, a woman doesn't know she is pregnant until several weeks after conception. Anything taken during the first three months will have the most devastating effect on the fetus.

**STUDENT
WORKBOOK****For use with Chapter 6**

Text Pages 154-191

CHAPTER 6 STUDY GUIDE

DIRECTIONS: As you read the chapter, answer the following questions. Later, you can use this guide to study the chapter information.

Early Signs of Pregnancy

1. List some common indications of pregnancy. How is pregnancy confirmed?

Answers may include a missed menstrual cycle; an ache or feeling of fullness in the lower abdomen; fatigue, drowsiness, or faintness; more frequent urination; breast discomfort or tenderness; morning nausea. Pregnancy is confirmed by a pregnancy test.

2. Why is a doctor's care important throughout pregnancy?

To prevent serious complications.

3. What type of doctor specializes in care of expectant mothers?

An obstetrician.

4. What is anemia? How does the doctor check for it?

Anemia is a condition caused by lack of iron, which results in poor appetite, tiredness, and weakness.

It is determined by a blood test.

5. Name five complications of pregnancy. What should be done if any of these are experienced?

Any five: vaginal bleeding; unusual weight gain; excessive thirst; reduced or painful urination; severe abdominal pain; persistent headaches; severe vomiting; fever; swelling of face and hands; blurred vision or dizziness. For all symptoms, talk to a doctor immediately.

Nutrition During Pregnancy

6. Explain why good nutrition is the single most important factor in prenatal care.

A balanced diet is needed for proper development of the baby and for the good health of the mother.

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7. Name the five major types of nutrients needed by the body, the functions they perform, and one food that is a good source of each.

Nutrient	Functions	Source
Protein	Growth of baby, repair of mother's body	Meat, fish, poultry, eggs, milk, cheese, and beans
Vitamins	Promote good health, protect against infection and disease, regulate body processes	Vegetables, fruits, whole-grain or enriched breads and cereal products, fortified milk
Minerals	Sturdy bones, healthy blood, regulation of elimination	Meat, beans, peas, spinach, raisins, dates, and milk
Fats	Provide heat and energy	Vegetable oils
Carbohydrates	Provide heat and energy	Vegetables, fruits, whole-grain breads and cereal products

8. Name the basic food groups in the Food Guide Pyramid, and tell how many servings of each a pregnant woman should have daily.

Milk, Yogurt, and Cheese Group—three servings.

Meat-Poultry-Fish-Beans Group—three or more servings.

Fruit Group—two to four servings. Vegetable Group—three to five servings.

Bread-Cereal Group—six to eleven servings. Fats, Oils, and Sweets Group—use sparingly.

9. Why is good nutrition essential during adolescence, even if a girl is not pregnant?

Nutrition influences health, and the health of the woman influences the health of any children she may have.

10. What is the recommended weight gain during pregnancy? Why is adequate weight gain important?

24 to 30 pounds (10.9 to 13.65 kg). Too little weight gain can cause fetal death or premature birth.

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Study Guide

Personal Care and Activities

11. Give guidelines for each of the following aspects of prenatal care.

Rest At least eight hours of sleep per night and several rests during the day.

Exercise Moderate exercise without straining.

Hygiene Daily bath or shower.

Other daily routines Follow usual routines, but be careful when bending, reaching, and lifting.

Travel Discuss travel with the doctor.

12. Give guidelines for choice of clothes and shoes during pregnancy.

Clothes—comfortable and loose enough for freedom of movement and circulation.

Shoes—comfortable, low-heeled with good support.

Emotional Health During Pregnancy

13. How do physical changes during pregnancy bring about emotional changes for the mother-to-be?

Hormonal changes caused by pregnancy sometimes produce swings between happiness and depression.

Roles, Responsibilities, and Decisions

14. Explain the difference between maternity leave and paternity leave.

Maternity leave is time off from work for the mother; paternity leave is time off for the father.

Preparing for Parenthood

15. When should a couple discuss their ideas about parenting methods? Why?

Before the baby is born. Early agreement on parenting methods can help avoid conflict later on.

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Chapter 6, continued Study Guide

Other Children in the Family

16. How can parents prepare other children in the family for the arrival of a new baby?

Make other children feel loved and accepted. Stress that the new baby belongs to the children as well as to the parents. Have children help in preparations for the baby's arrival.

Decisions About Feeding

17. Why do many experts recommend breast-feeding a baby?

Breast-feeding is ideally suited to the needs of the baby and provides temporary immunity from diseases. Physical closeness helps create a bond between mother and child.

18. What are some reasons for choosing bottle-feeding instead of breast-feeding?

Bottle-feeding is convenient; father can participate in feeding; it makes returning to work easier; babies can be fed anywhere by anyone. Some mothers are unable to breast-feed or do not choose to do so.

Baby's Room

19. How should a baby's room or sleeping area be equipped?

It should have a bed (crib, bassinet, or basket); a place for changing and dressing baby, storage space for clothes and equipment, a wastebasket, a covered diaper pail, a clothes hamper, and a chair.

Estimating Expenses

20. List the major expenses related to having a baby.

Doctor's fees; hospitalization fees; maternity clothes; baby's clothing, equipment, and supplies; formula and baby food; baby's medical care; furnishings for baby's room; child care services.

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Chapter 6, continued
Study Guide

Reducing Expenses

21. Name three ways to reduce the costs of having a baby.

Have good health and hospitalization insurance. Buy secondhand equipment and supplies.

Practice careful shopping.

Making a Budget

22. Why is it especially important for new parents to keep a budget?

A budget can help them plan for added expenses and set aside savings for the family's future needs.

23. How do fixed and variable expenses differ?

Fixed expenses cannot be changed, while variable expenses can be increased or decreased.

What Is Prepared Childbirth?

24. What are the benefits of childbirth-preparation courses?

They help people prepare for pregnancy and birth by learning what happens during labor and delivery, seeing films of childbirth and receiving reading material, learning relaxation and breathing techniques, and learning to work with a coach during labor and delivery.

Who Will Deliver the Baby?

25. Differentiate between a nurse-midwife and a lay midwife.

A nurse-midwife is a registered nurse with advanced training in pregnancy and birth. A lay midwife has no nursing degree, but is specially trained in the care of pregnant women and uncomplicated deliveries.

26. Give four guidelines to follow in choosing a birth attendant.

Any four: get recommendations from family doctor, county medical society, or local hospital; visit and talk with each person being considered; be sure attendant is qualified, answers questions clearly, and makes parents feel comfortable; find out how emergencies are handled after office hours; find out the medical facility where attendant is affiliated; choose attendant whose preferences toward delivery procedures agree with those of the parents.

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Study Guide

Where Will the Baby Be Born?

27. List three services that may be offered at a hospital with family-centered maternity care.

Any three: childbirth and parenting classes; special programs to prepare siblings for the new baby;
fathers and other family members are present during labor and birth; birthing rooms; different
positions for birth are offered; special procedures are allowed; the baby and mother may be able to
room together after the birth.

28. What is an alternative birth center?

A separate homelike facility for giving birth, not in a hospital.

29. Why do alternative birth centers carefully screen the mothers who want to give birth there?

To avoid high risk mothers who may have complications requiring the services and equipment of a
hospital.

**STUDENT
WORKBOOK**

For use with Chapter 7
Text Pages 192-223

CHAPTER 7 STUDY GUIDE

DIRECTIONS: As you read the chapter, answer the following questions. Later, you can use this guide to study the chapter information.

The Beginning of Labor

1. What is labor?

The pushing of the muscles of the mother's uterus to gradually push the baby out of her body.

2. Briefly explain three possible signs of the beginning of labor.

A backache and slight cramps, which get stronger and come more frequently.

A trickle or gush of liquid from the vagina caused by the breaking of the amniotic sac.

Blood or pinkish vaginal staining because the plug of mucus sealing the cervix has come loose.

Stages of Labor

3. Briefly explain the three stages of labor, including the amount of time spent in each stage.

First stage Contractions open the cervix—lasts up to 12 hours.

Second stage The baby is born—lasts from a few minutes to three hours.

Third stage The placenta is expelled—lasts from 2 to 30 minutes.

4. How can medication reduce discomfort?

They can change a woman's perceptions of pain. They can completely numb an area so that no pain is felt.

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Chapter 7, continued Study Guide

5. What makes molding of the baby's head possible? How does this help the birth process?

The baby's skull consists of five soft, overlapping bones. This ability to be molded helps the baby's skull pass through the mother's pelvis more easily.

6. What is an episiotomy? Why may it be used?

An incision that enlarges the external opening of the vagina. It is used to protect a large baby's head from external pressure and to prevent the mother's tissues from being torn during birth.

7. What are forceps? Why may they be used?

Specialized tongs molded to fit the shape of a baby's head. They are used to control the movement of the baby's head during birth.

Cesarean Birth

8. Explain the difference between a cesarean birth and a vaginal delivery.

In a cesarean birth, the baby is delivered through a surgical incision in the mother's abdomen instead of through the birth canal as in a vaginal delivery.

9. Explain what happens after birth so that the newborn can take in oxygen.

Pressure of the birth canal forces fluid out of the lungs; when the baby emerges, the lungs automatically expand.

10. What are fontanelles? Open spaces, or "soft spots," in the bones of the baby's head.

11. Describe the physical features of the newborn.

Fat cheeks; short, flat nose; receding chin; nearly adult-sized eyes, usually grayish-blue in color; head may appear lopsided or pointed and is wobbly and large; general body color is dusky; forehead, back, and shoulders may be covered with downy hair; tiny bumps (milia) over cheeks and nose; may be covered with milky white substance (vernix).

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Chapter 7, continued Study Guide

Examining the Newborn

12. What is the purpose of using the Apgar rating scale?

To check the newborn's physical condition so that special medical attention can be given if needed.

Bonding and Attachment

13. What is the process of bonding? How can the process be strengthened just after birth?

Bonding is the forming of lifelong emotional ties between parents and the newborn. It can be strengthened by placing the baby in the mother's arms or on her stomach, having the parents stroke and talk to the baby, or having the baby nurse within minutes of birth.

14. What is colostrum? Why is it important?

The fluid secreted by the mother's breasts right after birth. It is easy for the newborn to digest and is rich in antibodies to protect against disease.

The Hospital Stay

15. What is the difference between rooming-in and the usual hospital plan? Why is rooming-in beneficial?

Rooming-in involves having the baby stay in the same room with the mother, rather than in a central nursery as in the usual hospital plan. Rooming-in helps the bonding process and lets parents get to know the baby and learn proper care.

Postnatal Care of the Mother

16. List the four ways the mother can best care for her postnatal physical needs.

Rest, exercise, good nutrition, and a medical checkup.

17. What are the "baby blues"? What can a mother do to help cope with them?

Feelings of disappointment, loneliness, or resentment that occur sometimes after the birth. Talk over feelings with someone sympathetic, take some time away from the baby, and take good physical care of herself.

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Study Guide

Caring for Premature Babies

18. When is a newborn considered premature? What are some of the problems of premature babies?

When it is born before eight and one-half months or weighs less than 5 1/2 pounds (2.5 kg). Their
systems for heat regulation, breathing, and digestion are not mature. They are prone to infections.

19. What is the special type of crib used for premature babies? An incubator.

The Amazing Newborn

20. What are reflexes? What is their purpose? Instinctive, automatic responses. They help the baby's
body function.

21. Briefly describe each of the following reflexes.

Rooting reflex If something touches the baby's lips or cheeks, it turns toward the touch and begins
to suck.

Grasp reflex If something is pressed into the baby's palm, the fingers will curl and hold tight.

Startle reflex If a loud noise occurs or the baby's stomach is touched, it will throw the arms apart,
spread the fingers, extend the legs, and throw back the head.

Learning to Care for the Newborn

22. List the basic needs of newborns, and give examples of ways to provide for these needs.

Food—immediately feed the baby when it is hungry.

Sleep—let the baby sleep as needed throughout the day and night.

Exercise—let the baby kick while being diapered and splash and wiggle during the bath.

Safety, cleanliness, and warmth—watch baby when awake to keep safe, bathe and diaper regularly,
dress for conditions.

Medical care—provide periodic checkups in the first year.

Things to look at, touch, listen to, and play with—play with, talk to, and touch baby.

Love—provide close contact with baby, and show the love that is felt.

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Study Guide

23. What type of doctor specializes in the care of babies and young children?

A pediatrician.

24. Identify the five needs of parents that you think are most important.

Any five: knowledge of how to care for an infant; resources to turn to; information about normal infant behavior; time to fill their roles; emotional support; financial planning; reassurance and confidence; agreement about responsibilities; personal health, rest, and nutrition; privacy and time alone.

25. How long does it usually take for newborns to settle on a regular schedule?

A few weeks or a month.

26. How do newborns communicate? By crying.

27. What is meant by *temperament*? The inborn style of reacting to the world and relating to others.